



# Advanced Nonthermal Processing Methods

## **What It Is:**

From apples to sandwiches...the use of fresh foods and fresh-like preserved foods in military rations makes them more nutritious and appetizing to soldiers. New food-processing methods are being developed that don't involve the application of heat but do ensure the safety and nutritional value of fresh and fresh-like rations.

## **Why It's Needed:**

Traditional thermal methods of preserving food can lead to chemical changes that may compromise the more heat-sensitive nutrients in rations and may also produce negative effects on taste, appearance or texture.

## **How It Works:**

New nonthermal ways of pasteurizing food, such as **High-Pressure Preservation (HPP)** and **Pulsed Electric Fields (PEF)** are being explored. The appeal of these methods is their high potential for controlling the microbiology of food-without the chemical changes brought on by thermal preservation.

Each technology is being optimized through a set of two-year or three-year efforts that will include these critical steps:

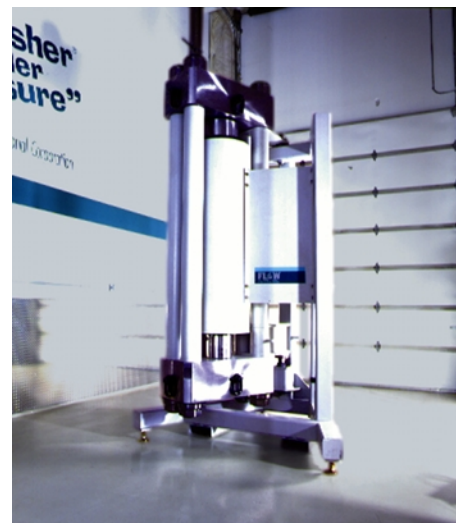
- Encourage a solid production base employing our improved pasteurizing methods;
- Obtain regulatory approval for these new preservation technologies.

## **Benefits:**

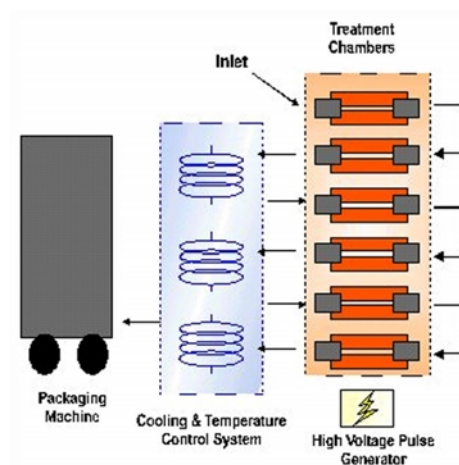
**Warfighters' Wellbeing...** Providing fresh fruits, vegetables and dairy foods to soldiers will improve both their morale and their nutrition.

## **Contact:**

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**HPP Apparatus**



**PEF Treatment System**

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Soldier and Biological  
Chemical Command

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01760  
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